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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/759,229	01/20/2004	Gary Michael Everingham	051481-5144	6451

7590 09/27/2005

Siemens Corporation
Intellectual Property Department
170 Wood Avenue South
Iselin, NJ 08830

EXAMINER

FRISTOE JR, JOHN K

ART UNIT	PAPER NUMBER
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3751

DATE MAILED: 09/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/759,229

Applicant(s)

EVERINGHAM ET AL.

Examiner

John K. Fristoe Jr.

Art Unit

3751

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 January 2004 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>9/22/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed 9/22/2004 is acknowledged by the examiner.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-5, 8-11, and 15 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Pat. No. 6,453,891 (Kato et al.). Kato et al. discloses a prior art EGR valve having a method of calibrating a valve comprising the steps of a valve portion including a valve seat (5) and a valve member (8), providing a linear actuator including a shaft (32) and a rotary motor (20), displacing (col. 2, lines 7-10) the shaft (32) towards the valve portion using the actuator (20), contacting (col. 2, lines 10-14) the shaft (32) with the valve portion to locate the position of the valve member (8) relative to the valve seat (5), wherein the contacting steps locates the closed valve position (the valve is closed until the rotary shaft displaces the valve therefore when the shaft contacts valve stem it locates the closed valve position, figure 1), providing a disc-shaped element (the end portion of the rotary shaft 32 is disc-shaped in figure 1) at the end of the shaft (32),, measuring displacement (col. 2, lines 48-52) of the shaft (32), wherein the contacting step includes detecting (the contact would be detected by the user once the shaft contacts the stem) an absence of displacement of the shaft, wherein the motor (20) has an axis of rotation and the valve

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portion includes a stem (6) having a longitudinal axis that is parallel (figure 1), a stem (6) having a first end fixed to the valve member (8) and a second end (the upper portion in figure 1) adapted for being in contact with the shaft (32), providing a linear compression spring (10) decoupled from the shaft (32) and coupled to the stem (6), and wherein the shaft 32) is not coupled (figure 1) to the stem (6).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 6,453,891 (Kato et al.) in view of engineering expedient. Kato et al. discloses a prior art EGR valve having a method of calibrating a valve comprising the steps of a valve portion including a valve seat (5) and a valve member (8), providing a linear actuator including a shaft (32) and a rotary motor (20), displacing (col. 2, lines 7-10) the shaft (32) towards the valve portion using the actuator (20), contacting (col. 2, lines 10-14) the shaft (32) with the valve portion to locate the position of the valve member (8) relative to the valve seat (5), wherein the contacting steps locates the closed valve position (the valve is closed until the rotary shaft displaces the valve therefore when the shaft contacts valve stem it locates the closed valve position, figure 1), providing a disc-shaped element (the end portion of the rotary shaft 32 is disc-shaped in figure 1) at the end of the shaft (32),, measuring displacement (col. 2, lines 48-52) of the shaft (32), wherein the contacting step includes detecting (the contact would be detected by the user once

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the shaft contacts the stem) an absence of displacement of the shaft, wherein the motor (20) has an axis of rotation and the valve portion includes a stem (6) having a longitudinal axis that is parallel (figure 1), a stem (6) having a first end fixed to the valve member (8) and a second end (the upper portion in figure 1) adapted for being in contact with the shaft (32), providing a linear compression spring (10) decoupled from the shaft (32) and coupled to the stem (6), and wherein the shaft 32 is not coupled (figure 1) to the stem (6) but lacks the step of detecting the absence of displacement for a period of 100 milliseconds. One of ordinary skill in the art of calibrating valves would detect the absence of contact between two members for the amount of time necessary to determine whether the valve is calibrated. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of calibrating an EGR valve of Kato et al. by detecting the absence of contact between two members for a specific amount of time as an engineering expedient in order to calibrate the valve in a manner that is needed by the user.

6. Claims 7 and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 6,453,891 (Kato et al.) in view of U.S. Pat. No. 6,012,437 (Radhamohan et al.). Kato et al. discloses a prior art EGR valve having a method of calibrating a valve comprising the steps of a valve portion including a valve seat (5) and a valve member (8), providing a linear actuator including a shaft (32) and a rotary motor (20), displacing (col. 2, lines 7-10) the shaft (32) towards the valve portion using the actuator (20), contacting (col. 2, lines 10-14) the shaft (32) with the valve portion to locate the position of the valve member (8) relative to the valve seat (5), wherein the contacting steps locates the closed valve position (the valve is closed until the rotary shaft displaces the valve therefore when the shaft contacts valve stem it locates the closed valve

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position, figure 1), providing a disc-shaped element (the end portion of the rotary shaft 32 is disc-shaped in figure 1) at the end of the shaft (32),, measuring displacement (col. 2, lines 48-52) of the shaft (32), wherein the contacting step includes detecting (the contact would be detected by the user once the shaft contacts the stem) an absence of displacement of the shaft, wherein the motor (20) has an axis of rotation and the valve portion includes a stem (6) having a longitudinal axis that is parallel (figure 1), a stem (6) having a first end fixed to the valve member (8) and a second end (the upper portion in figure 1) adapted for being in contact with the shaft (32), providing a linear compression spring (10) decoupled from the shaft (32) and coupled to the stem (6), and wherein the shaft 32) is not coupled (figure 1) to the stem (6) but lacks a sensor that detects the position of the valve member. Radhamohan et al. teach an EGR valve comprising a valve member (28), a valve shaft (26), an electric motor (40), and a position sensor (48) that detects the position of the valve member (col. 3, lines 51-53). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of calibrating the an EGR valve and a method of finding a closed valve position of Kato et al. by providing a position sensor in an EGR valve as taught by Radhamohan et al. in order to more accurately detect the position of the valve.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Pat. No. 5,680,880 (Miyake et al.) disclose an EGR valve having an uncoupled shaft and stem.

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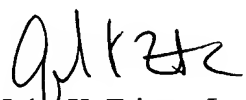
U.S. Pat. No. 6,227,183 (Miyoshi et al.) disclose an EGR valve having an uncoupled shaft and stem.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John K. Fristoe Jr. whose telephone number is (571) 272-4926.

The examiner can normally be reached on Monday-Friday, 7: 00 a.m-4: 30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Justine R. Yu can be reached on (571) 272-4835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



John K. Fristoe Jr.
Examiner
Art Unit 3751

JKF



EDWARD K. LOOK
SUPERVISORY PATENT EXAMINER
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9/22/05